

PUBLIC WORKS & CAPITAL PROJECTS

RESOLUTION NO. 2014187

RE: AMENDING THE 2014 ADOPTED COUNTY BUDGET AS  
IT PERTAINS TO THE DEPARTMENT OF PUBLIC WORKS (A.1620)

Legislators HUTCHINGS, BOLNER, MICCIO, and SAGLIANO offer the following  
and move its adoption:

WHEREAS, the Commissioner of Public Works has advised due to system leaks and  
related parts deterioration, the geothermal system at the Emergency Response Center is currently in a  
compromised state and must be assessed, completely recharged with a glycol mix and have  
valves/gauges replaced, and

WHEREAS, this work is necessary for the system to cool and heat the building properly  
and also to prevent further damage to the entire system, and

WHEREAS, it is necessary to amend the 2014 Adopted County Budget to provide  
funds to meet the County's obligation for this project, now therefore, be it

RESOLVED, that the Commissioner of Finance is authorized, empowered and directed  
to amend the 2014 Adopted County Budget as follows:

APPROPRIATIONS

Increase

|             |                              |                  |
|-------------|------------------------------|------------------|
| A.1620.4613 | Repairs/Alt to Real Property | <u>\$144,000</u> |
|-------------|------------------------------|------------------|

Decrease

|             |                     |                  |
|-------------|---------------------|------------------|
| A.1990.4007 | General Contingency | <u>\$144,000</u> |
|-------------|---------------------|------------------|

CA-120-14

CAB/ca/G-0188

6/19/14

Fiscal Impact: See attached statement

STATE OF NEW YORK

ss:

COUNTY OF DUTCHESS

This is to certify that I, the undersigned Clerk of the Legislature of the County of Dutchess have compared the foregoing resolution with the original  
resolution now on file in the office of said clerk, and which was adopted by said Legislature on the 7<sup>th</sup> day of July 2014, and that the same is a true and correct  
transcript of said original resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of said Legislature this 7<sup>th</sup> day of July 2014.

CAROLYN MORRIS, CLERK OF THE LEGISLATURE

## FISCAL IMPACT STATEMENT

☐ NO FISCAL IMPACT PROJECTED

### APPROPRIATION RESOLUTIONS (To be completed by requesting department)

Total Current Year Cost \$ 144,000

Total Current Year Revenue \$ 0  
and Source

Source of County Funds (check one): ☐ Existing Appropriations, ☐ Contingency,  
☐ Transfer of Existing Appropriations, ☒ Additional Appropriations, ☐ Other (explain).

Identify Line Item(s):

Repairs to Geothermal System at the Emergency Response Center

Related Expenses: Amount \$ \_\_\_\_\_

Nature/Reason:

Anticipated Savings to County: \$ 0

Net County Cost (this year): \$144,000  
Over Five Years: \_\_\_\_\_

#### Additional Comments/Explanation:

Due to system leaks and related parts deterioration, the geothermal system at the Emergency Response Center is currently in a compromised state and must be assessed, completely recharged with a glycol mix and have valves/gauges replaced. This work is necessary for the system to cool and heat the building properly and also to prevent further damage to the entire system as the weather gets cold in the fall.

The estimated cost for this work is approximately \$144,000. (With the hope that the cost could be less once the system is assessed in detail.)

Prepared by: Noel Knille, Commissioner of Public Works

MARCUS J. MOLINARO  
COUNTY EXECUTIVE



NOEL H.S. KNILLE, AIA, ASLA  
COMMISSIONER

ROBERT H. BALKIND, P.E.  
DEPUTY COMMISSIONER

**COUNTY OF DUTCHESS**  
DEPARTMENT OF PUBLIC WORKS  
ADMINISTRATION

MEMORANDUM

To: W.F.X. O'Neil, Deputy County Executive

From: Noel H. S. Knille, AIA, ASLA, Commissioner

Date: June 17, 2014

RE: *Geothermal System Repairs/Glycol Recharge for Emergency Response Center*

2014 JUN 18 AM 10:48

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On the morning of Friday 01/24/14 there was a leak in a piping in the geothermal vault (located below ground underneath the parking lot) at the Emergency Response Center. Propylene glycol and water mixture was overflowing the vault and running across the parking lot. A vapor mixture of water and propylene glycol had collected in the vault.

Westech International, the company who performed the original installation of the "building side" of the geothermal system, was called in on an emergency to address the leak. They repaired the leak, and replaced the lost propylene glycol/water mixture with water only (due to unknown factors as to the % of glycol required for the system and wanting not to compromise the system with the incorrect glycol-water mix), leaving the system with no freeze protection, inhibiting the system's ability to transfer heat, and therefore condition space inside the building. They also noted that the vault seemed to have been collecting ground water for quite some time, causing stalactites and stalagmites to form on the headers and gauges and making it very difficult to read the gauges and to check the operation status on the isolation and balancing valves. The condition of the valves is questionable and many might need to be replaced.

As a result, design documents are in the final stages of being developed that will be used to procure a low bid contractor to perform the following work:

1. Provide and install freeze proof concentrate propylene glycol sufficient to bring the geothermal system to the required 40% solution. Sufficient biocide and rust inhibitors shall also be installed.
2. Provide and assessment report, including a minimum of 20 color photographs, of the working conditions of, including but not limited to, all 112 temperature gauges, 112 pressure gauges, 112 triple duty valves and all other equipment contained in the geothermal vault/manhole.

3. Provide unit pricing, including parts, materials, labor, etc. for the replacement of one "assembly" in the geothermal manhole. An assembly includes all materials, components, etc. as shown in detail 2 on drawing H-701 "Base Mount Pump Detail".
4. Provide unit pricing, including parts, materials, labor, etc. for the replacement of one "partial assembly" in the geothermal manhole. A "partial assembly" includes all materials, components, etc. as shown in detail 2 on drawing H-701 "Base Mount Pump Detail" from the flexible connection upward (pump, drain, suction diffuser not included).
5. Provide a two year service/maintenance contract, including parts and labor for the Geothermal System at The Dutchess County Emergency Response Center. The service contract will also include the task of maintaining the proper propylene glycol, rust inhibitors and biocide levels in the system.

The glycol re-charge is estimated at approximately \$60,000. The replacement of valves/gauges could be as much as \$50,000, depending on how many need to be changed out. Ancillary costs are estimated at approximately \$10,000. With 20% contingency, the amount requested for necessary repairs to the geothermal heating/cooling system is \$144,000. (There is the chance that once detailed assessment of the valve assemblies takes place that the cost could be less. The work will be assessed carefully.)